LB-100 SERIES

BOOK SHELF SPEAKER SYSTEM

OWNER'S GUIDE

ENGLISH VERSION

FOR YOUR RECORDS

Serial numbers are located on the back panel of each Liquid Acoustic Speaker.
Keep your sales receipt together with this owner's guide to obtain warranty service and for proof of purchase.

Loudspeaker Serial Numbers

Left: _____

Right: _____

Extender (Mini) Modules Serial Numbers

Left: _____

Right: _____

Dealer Name: _____

Dealer Phone: _____

Purchase date: _____

WARRANTY PERIOD

The Liquid Acoustics Book Shelf speakers are covered by a limited 10-year transferable warranty.

PLEASE READ THIS OWNER'S GUIDE

Please take the time to read and follow this owner's guide carefully. The enclosed information will help you set up and operate your system properly to enjoy all of its advanced features. Save your owner's guide for future reference.

WARNING: To reduce the risk of fire or electric shock, **do not expose the Liquid Acoustics™ Book Shelf Speaker to the outdoors Under Any Circumstances**

SAFETY INFORMATION

- **RISK OF ELECTRICAL SHOCK**
- **DO NOT OPEN SPEAKER UNITS NOR ATTEMPT TO OPEN THE ENCLOSURE**
- **TO REDUCE THE RISK OF ELECTRIC SHOCK, DO NOT REMOVE COVER, FILL PLUGS OR BACK**

- **THIS IS NOT AN OUTDOOR SPEAKER**
- **DO NOT PUNCH OR DRILL HOLES IN THIS ENCLOSURE**
- **DO NOT MOUNT THIS ENCLOSURE UPSIDE DOWN**
- **NO USER-SERVICABLE PARTS INSIDE. REFER ALL SERVICE TO LIQUID ACOUSTICS**

CUSTOMER SERVICE

For additional help in solving problems, contact Liquid Acoustics customer service. See the back cover for your customer service office and phone numbers.

BEFORE YOU BEGIN

Thank you for purchasing the Liquid Acoustics™ LB-100 Book Shelf Speaker System. These speakers represent the best in speaker design and engineering and will give you many years of listening pleasure. The installation and operating principles of this system are significantly different from those of conventional speakers. To obtain the best possible performance and to avoid problems, please take the time to read this guide. **We strongly recommend that you refrain from higher levels of audio for the first three to four weeks for the speaker drivers to set in.**

UNPACKING THE CARTONS

A complete Liquid Acoustics™ Bookshelf LB-100 speaker system consists of two enclosures. Each enclosure contains two flush mounted drivers. Carefully unpack your system, saving all packing material. Inspect the speakers, enclosures and modules. If any part of the enclosure appears damaged, **do not attempt** to use the system. Repack the speakers in their original cartons and notify your authorized Liquid Acoustics dealer immediately.

NOTE: Now is a good time to record the serial numbers of each speaker and module. The serial numbers are located on the rear of the Liquid Acoustic speakers.

WARNING: Each speaker carton weighs 28 lbs. Use good lifting practice to avoid injury.

WARNING: The plastic bags enclosing the speakers are not a toy. To avoid danger of suffocation, keep the plastic bags out of the reach of children.

NEVER TURN OR MOUNT THE ENCLOSURE UPSIDE-DOWN.

What comes in the CARTON:

- Two Liquid Acoustic™ speakers
- Owner's Manual
- Two Extender (Mini) Modules

SYSTEM COMPATIBILITY

Liquid Acoustics™ LB-100 Speaker Systems work with your stereo components producing a superb music system. The Liquid Acoustics enclosures contain internal liquid-gel filled chambers *tuned by the factory* for superb sound. Never attempt to empty or fill the chambers through the top fill holes. The gel installed at the factory will last for years to come and does not require replacement. Any unauthorized attempt to remove the fill hole plugs will result in the warranty being voided.

The system may be connected in a variety of ways, depending upon the components you have. The two most common methods are described in this guide. Using different components may require different connection methods. Consult your equipment owner's manual.

Your Liquid Acoustics speakers are designed to work compatibly with receivers or amplifiers rated from 40 to 200 watts per channel. In this guide, the term receiver is used to refer to an integrated preamplifier and power amplifier, which may also contain an AM/FM tuner. The term "amplifier" is used to describe configurations involving separate preamplifier and amplifier components.

INSTALLATION STEPS

Follow these steps, in the order below, to install your Liquid Acoustics speaker system:

1. Choose the best locations and support for your speakers.
2. Connect the speakers to the amplifier or receiver.
3. Connect each mini module to each speaker. Observe color codes.

CHOOSING THE LOCATION FOR YOUR SPEAKERS

Choose a good location for your speakers. They are designed primarily to be placed on a bookshelf, in a corner, or in an audio equipment entertainment center. Best performance is obtained in a corner, or against a wall.

GUIDELINES FOR PLACEMENT

Also see pictorials in this manual for home entertainment centers.
Place the Liquid Acoustic speakers along the same wall and level:

- 4 to 12 feet apart. Do not aim the "V" (front/center) toward a corner.
- At least two feet from sound-absorbent furnishings.
- 1 to 6" inches from the side and rear walls.
- 18 to 36 inches from the floor or ceiling. For optimum sound, we recommend not placing the speakers exactly halfway between floor and ceiling.

CHOOSE THE SUPPORT FOR YOUR SPEAKERS

LB-100 Book Shelf Speakers can be placed on a table or shelf, Liquid Acoustics matching floor pedestals, or suspend the speakers from your wall or ceiling.

To mount this enclosure on the wall or ceiling, please use the Liquid Acoustics™ Bracket Kit.

Do not attempt to drill any holes in the Liquid Acoustics enclosures. Doing so will cause severe damage and void any warranty.

Always hang these speakers in an upright position, with the terminal connections facing the rear.

TO SET THE SPEAKERS ON A TABLE OR SHELF

Although each speaker weighs up to 10 lbs., a suitable shelf or table must be able to support 100 lbs.

TO STAND THE SPEAKERS ON THE FLOOR

Use only Liquid Acoustics pedestals (PS-LA) as floor stands. They are designed to provide the proper support and are available through your authorized Liquid Acoustics dealer.

CAUTION: Do not mount on surfaces that are not sturdy enough, or that have hazards concealed behind them, such as plumbing or electrical wire. If you are unsure of your ability to install these speakers, contact a qualified professional installer.

GENERAL NOTES ON CEILING SUSPENSION USING THE BRACKET KIT
-NOT INCLUDED IN THIS PACKAGE-

- Suspend the speakers 18 – 36 inches (45 – 91 cm) from the ceiling using the optional factory bracket kit. Do not mount them flush to the ceiling.
- To ensure an accurate stereo image, the distance from the floor should be three to ten feet (1 – 3.5 m). Be sure the speakers are no less than 18 inches (45 cm) from the floor. Do not suspend the speakers exactly halfway between the floor and ceiling.

NOTE: Contact Liquid Acoustics for more information before suspending speakers. Do not drill the cabinets or punch holes. Doing so will damage the speaker and void your warranty. For details on your specific ceiling construction, consult a qualified building contractor or professional installer

SPEAKER CONNECTIONS

With your speakers in their chosen locations, connect them to the receiver.

CHOOSING THE WIRE

It is important to use the right thickness of speaker wire. For distances of up to 30 feet (9m), 18-gauge (.075 mm) 2-conductor wire works well.

NOTE: To determine if a particular wire is suitable for use in a wall or under a floor, check your local building codes. You may want to contact a qualified electrical installer for this information.

PREPARING THE SPEAKER WIRES

Examine the speaker wire. Note that it is actually a pair of insulated wires that may be gently pulled apart. The insulation around one wire is marked with a stripe, collar, rib, groove, or printing. Use the marked wire as positive (+) and the unmarked wire as negative (-). These wires correspond to the positive and negative terminals on the speaker and receiver.

NOTE: It may be difficult to distinguish wire markings. Inspect both wires carefully. To prepare the ends of each wire:

1. Strip approximately ½ inch (12 mm) of insulation from both wires.
2. Twist the bare ends of each stranded wire, to prevent strands from touching across terminals.

CONNECTING THE SPEAKERS

CAUTION: Before making any connections, turn off your receiver and unplug it from the AC (main) power outlet. Not doing this may result in damage to your system. Speaker terminals are located on the top rear of each speaker. Unscrew the top plastic portion of one of the speaker connections, insert the bare wire into the hole, and tighten the plastic nut. The pressure should now secure the wire to the connector. Tug on the wire gently to see that it is secure. These connectors are called “banana jacks.”

1. Connect one wire pair to the speaker on the RIGHT.
   a. Attach the marked wire at one end to the positive (+) terminal (RED).
   b. Attach the plain wire at that end to the negative (-) terminal (BLACK).
2. Connect the other ends of the same wire pair to the RIGHT SPEAKER OUTPUT of your receiver.
   a. Attach the marked wire to the positive (+) terminal.
   b. Attach the plain wire to the negative (-) terminal.
3. Following the steps above, connect the second pair of wires to the LEFT speaker and to the LEFT SPEAKER OUTPUT on the receiver.
4. Plug the extender module connectors into the banana jacks located at the back of the each speaker. Observe color codes.

NOTE: If your receiver offers a choice of output impedances, use the terminal marked 8 and/or 8 ohms.

CHECKING THE SPEAKER CONNECTIONS

Make sure the speaker wire is firmly seated. Check to be sure the wires are connected positive to positive (+ to +) and negative to negative (- to -). Make sure no loose strands of wire touch across terminals, which can cause short circuits. Remember your Liquid Acoustics Enclosures HAVE A DESIGNATED LEFT AND RIGHT. PLEASE OBSERVE THIS PLACEMENT CRITERIA IN YOUR ROOM FOR PROPER PERFORMANCE.

ADJUSTING THE SOUND

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USING THE TONE CONTROLS ON YOUR RECEIVER

These controls let you make adjustments to compensate for the effects of speaker location, room acoustics, and program quality.

1. Select a familiar musical piece.
2. Set all of your receiver tone controls to the center (flat) position. If it has a loudness compensation control (marked LOUD or LOUDNESS), set it to the OFF or OUT position.
3. Begin adjusting your controls to a desired comfortable room level.
4. If you have a graphic equalizer, set your equalizer to a classic “V” position.

BREAKING-IN PERIOD

All Liquid Acoustics™ units are pretested at our factory for the following: airtight ambient chamber sealing, gasket integrity, liquid gel level (if needed), driver performance, and overall response.

Notwithstanding this rigid testing and inspection, your new speaker system will require a breaking-in period. We suggest that you keep your program material at a low level for the first several days of use, then gradually engage in raising your levels every week or so. You will notice that the sound quality will improve greatly, warming up after the drivers begin to set in. Your unit should be completely set-in and up to total performance after 40-50 hours of use.

WARNING: Do not exceed the rated power of these speakers or damage will result. This is a high quality Book Shelf speaker system intended for the listener seeking a new and different sound. These speakers are not intended for heavy commercial, public address, or sound pressure levels that exceed normal listening levels. See the other Liquid Acoustics™ products for heavy-duty commercial sound expansion or reproduction applications.

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A WORD ABOUT DISTORTION

If attempting to push a speaker system to the maximum, distortion will usually become apparent. Sound distortion is defined as a change in the waveform of a signal during processing, often caused by the signal level being too high for the hardware performing the processing. Please keep in mind that “distortion” is “a fact of life” when it comes to sound reproduction. The higher quality something is, the lower the distortion is going to be at **normal operating levels.** Pushing the LB-100 speakers to their maximum will result in higher levels of distortion and it is at this stage where what is acceptable will depend for the most part on three factors:

1. First, pushing the speaker system extremely hard will cause damage.
2. Your ears and your tolerance for distortion begin long before your system shows signs of disintegration.
3. Injury to your hearing occurs long before the hardware systems themselves go awry, however, there is still a clear difference between the two.

MAINTAINING YOUR LIQUID ACOUSTICS™ SPEAKER SYSTEM

CLEANING YOUR SPEAKERS

Clean your speaker enclosures with a soft damp cloth. If necessary use a suitable furniture polish. Do not use any solvents, chemicals, or cleaning solutions containing alcohol, ammonia, or abrasives. Do not allow liquids to spill into the front speakers. Do not use any sprays near the system.

PRODUCT INFORMATION

CABINET

Acrylic tuned enclosure with internal chambers and air suspended compression driver mounting gaskets.

DIMENSIONS

15"W x 2 3/4"H x 8 1/4"D shelf space required
(33.0cm x 7.0cm x 12.7cm)

WEIGHT

6-10 lbs. when filled to capacity
Typical weight is 6 lbs.

TECHNICAL INFORMATION

TRANSDUCER COMPLEMENT

Two (2) 5 1/4" Vifa specially designed drivers in each cabinet

ENERGY DISPERSION

Twenty percent (20%) by reflection [corner placement]
Eighty percent (80%) by direct radiation

ENCLOSURE

Internal Liquid Gel 54 ounce total capacity with internal ambient chamber, radial tuning fins, semi-isobaric enclosure design

Liquid Acoustics™ Speaker Enclosure Material Properties	ASTM Test	Typical Values
Specific Gravity	D792	1.19
Tensile Strength Yield	D638	10,000
Tensile Modulus	D638	400,000
Izod Impact – Notched	D256	0.4
Hardness – Rockwell	D785	M94
Deflection Temp @ 264psi	D648	210
Deflection Temp @ 66 psi	D648	239
Co. Thermal Expansion	D696	$3.4X10^{-5}$

NOMINAL IMPEDANCE

Eight (8) ohms

AMPLIFIER COMPATIBILITY

Compatible with amplifiers/receivers rated from
40 - 200 watts RMS.
Rated @150 watts IEC

RECOMMENDED FUSING

Series connected 2-A quick-acting fuse
Buss AGC-3, Little fuse 212-002, or equivalent

WIRE RECOMMENDATIONS

GAUGE LENGTH
#18 30 ft (9 m) maximum
#16 45 ft (14 m) maximum
#14 70 ft (21 m) maximum

ACCESSORIES

To find out about the Liquid Acoustics™ floor pedestals, wall brackets, custom enclosure colors, and optional front grill coverings contact your Liquid Acoustics dealer, or call Liquid Acoustics™ toll free within the United States and Canada at 1-877-638-7251. We will be happy to assist you.

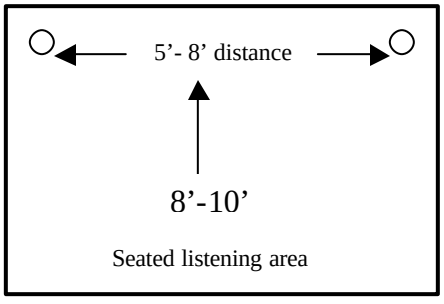
SUGGESTED LIQUID ACOUSTICS™ SPEAKER PLACEMENTS

SMALL HOME ENTERTAINMENT THEATRE

LARGE HOME ENTERTAINMENT THEATRE

Note: The above and below pictorials and illustrations represent the most optimum LB-100 speaker placements. While other room placements may vary, the above pictorials will give you a general idea as to how these speakers are best suited to operate. Try different room placements. Sound properties will vary with different room conditions: the type of draperies, reflective materials, carpet, hard wood floors, etc. Select the best arrangement to suit your personal listening pleasure.

OPEN ROOMS USING LIQUID ACOUSTICS™ STANDS OR OTHER SUITABLE SUPPORTS



Note: Place speakers at 36" to 40" above the floor, or at ear level when seated, with the fronts facing the listener as shown in the room illustration to the left.

The Liquid Acoustics™ stand (optional) automatically sets the distance from the corner with its base.

TROUBLESHOOTING

If you have a problem with your Liquid Acoustics speakers, turn off the receiver or amplifier before you proceed. Then check all the connections between the speakers and receiver. Correct any wiring problems before you follow the guidelines below. Problems are more likely to originate with equipment other than speakers. You may also want to refer to your receiver or other component owner's guides.

One speaker sounds

- Do not switch the wires; this could damage a speaker.
- Turn off the amplifier and disconnect.
- Reconnect to the other channel.
- If the speaker now plays correctly, the problem is not in the speaker or wiring.

Neither speaker plays

- Connect the speakers to another receiver or amplifier that is known to be operating properly.
- If the speakers now play correctly, the problem is not in the speakers.

***Liquid* Acoustics™**
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Visit the Liquid Acoustics website at www.liquidacoustics.com